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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,159	10/22/2003	Karen Lewis	P32181C1	6528

20462 7590 02/28/2006

SMITHKLINE BEECHAM CORPORATION
CORPORATE INTELLECTUAL PROPERTY-US, UW2220
P. O. BOX 1539
KING OF PRUSSIA, PA 19406-0939

EXAMINER	
EBRAHIM, NABILA G	
ART UNIT	**PAPER NUMBER**
1618	

DATE MAILED: 02/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/691,159	LEWIS ET AL.	
	Examiner	Art Unit	
	Nabila G. Ebrahim	1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *35-54,75 and 76* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *35-54 and 75* is/are rejected.

7)☒ Claim(s) *76* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/9/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 11/23/2005 has been entered.

2. Status of Claims

Claims 35-54,75,76 are pending in the application.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 47 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim recites a disintegrating matrix comprises a methacrylic acid copolymer, methylcellulose or hydroxypropyl methylcellulose having a nominal viscosity of 4000. It is not clear if the viscosity recited is for each of the recited compounds or for hydroxypropylmethylcellulose only.

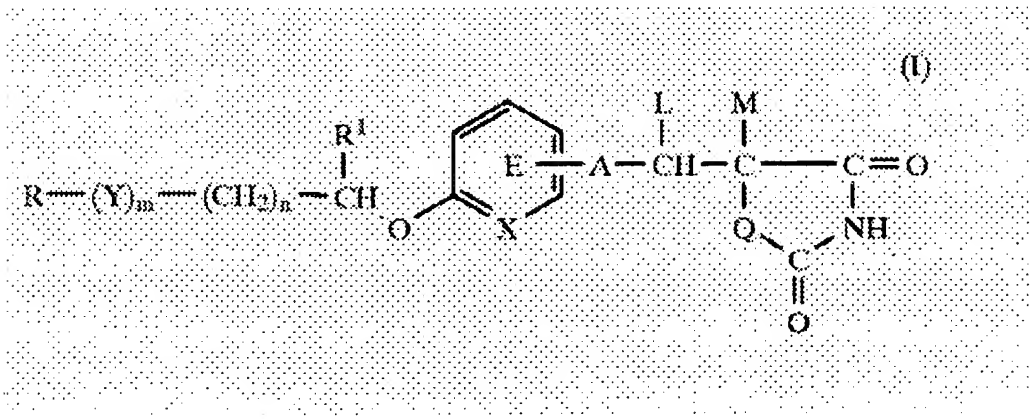
Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 35-42, 44, 45, 49, and 50 are rejected under 35 U.S.C. 102(b) as being anticipated by Ikeda et al. US 5952356 (hereinafter "Ikeda").

Ikeda teaches a pharmaceutical composition which comprises an insulin sensitivity enhancer in combination with other antidiabetics differing from the enhancer in the mechanism of action. Ikeda chooses the insulin sensitivity enhancer to be one of many compounds like compound of formula III:



wherein R represents an optionally substituted hydrocarbon or heterocyclic group; Y represents a group represented by —CO—, —CH(OH)— or —NR^3— (wherein R^3 represents an optionally substituted alkyl group); m is 0 or 1; n is 0, 1 or 2; X represents CH or N; A represents a bond or a C_{1-7} divalent aliphatic hydrocarbon group; Q represents oxygen atom or sulfur atom; R^1 represents hydrogen atom or an alkyl group; ring E may optionally have 1 to 4 substituents, and the substituents may optionally be combined with R^1 to form a ring; L and M respectively represent hydrogen atom, or L and M may optionally be combined with each other to form a bond; or a pharmacologically acceptable salt thereof;

Ikeda provided the insulin sensitivity enhancer in combination with a biguanide (claim 1); Examples of the biguanides include phenformin, metformin, and buformin (col. 11, lines 51, and 52). Ikada mixed the active components with a physiologically acceptable carrier (col. 13, lines 41- 44). To manufacture an oral dosage form, Ikeda suggested using a disintegrator e.g. calcium carbonate, carboxymethylcellulose calcium, etc (col. 13, line 64). In addition, he disclosed that where necessary, the compressed product is coated, by the per se known technique, for masking the taste or for enteric dissolution or sustained release (col. 14, lines 4-7). Since Ikeda teaches that the oral compressed dosage form may be uncoated or coated if necessary, it is interpreted as being a single or multilayered oral dosage form. The coating material that can be used includes cellulose acetate phthalate, hydroxypropylmethylcellulose phthalate, and methacrylic copolymer (col. 14, lines 8-10). The dosage of the insulin sensitivity

enhancer for an adult can be selected from the clinical oral dose range of 0.01 to 10 mg/kg body weight (preferably 0.05 to 10 mg/kg body weight, more preferably 0.05 to 5 mg/kg body weight).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 35-54, and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. US 5952356.

Ikeda has been explained above, however, Ikeda is deficient in disclosing the dosage of metformin in the composition.

Ikeda discloses the dosage of the insulin sensitivity enhancer and states that the other active component or components having different modes of action for use in combination can also be used in dose ranges selected by referring to the respective recommended clinical dose ranges. It is within the skills of a skilled artisan to decide the right dose of a drug and its amount in a dosage form.

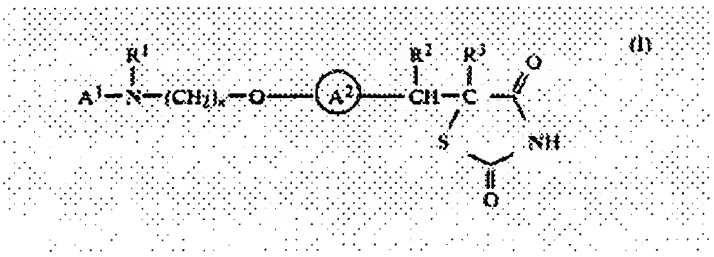
Ikeda has another deficiency compared to the instant application, which is the specific kind of methacrylic acid copolymers, type B and/or type C and the viscosity of the copolymer, which is recited in the current application as 4000.

The use of the right copolymer is within the skills of an artisan, once the use of the specific copolymer is known it is within the ability of people who work in the art to decide the right copolymer to be used to advance the results gained by its use, in this instance to advance the control of the release of the drug. Regarding the viscosity, once the right disintegrating material is used, the physical properties are inherent.

Accordingly, it would have been obvious to a skilled artisan to expand the knowledge of Ikeda and advance the composition by using the right copolymer to improve the disintegration and the release-control of the drug. The expected result would be a successful unilayered or multilayered dosage form containing a thiazolidine dione, and metformin in a controlled release dosage form.

Relevant Prior Art

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is Hindley US 5002953 (hereinafter "Hindley").
Hindley discloses compounds of the following general one of formulae:



A tautomeric form thereof and/or a pharmaceutically acceptable salt thereof, and/or a pharmaceutically acceptable solvate thereof (col. 3, lines 32-34). In claim 12, col. 41, line 13, and14 Hindley teaches the same thiazolidinedione recited in claim 1 of the instant application, which is: 5-(4-[2-(N-methyl-N-(2-pyridyl)amino)ethoxy]benzyl)-2,4-thiazolidinedione.

Hindley also teaches the use of an acceptable pharmaceutical carrier for his composition, which may comprise a diluent, filler, disintegrant, wetting agent, lubricant, colorant, flavorant or other conventional adjuvant (col. 10, lines 22-25). The unit dose suggested by Hindley normally contains an amount of the active ingredient in the range of from 0.1 to 1000 mg (col. 10, lines 32, and 33).

Allowable Subject Matter

7. Claim 76 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application

claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 35-54, 75, and 76 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 5-7, and 10-26 of copending Application No. 10/130224. Although the conflicting claims are not identical, they are not patentably distinct from each other because '224 recites the thiazolidinedione, metformin, and a carrier composition made into a controlled-release dosage form. The claims show the same layering of the tablet in instant claim 76.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nabila G. Ebrahim whose telephone number is 571-272-8151. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Hartley can be reached on 571-272-0616. The

fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nabila Ebrahim, MD - 2/13/06

MICHAEL HARTLEY
PRIMARY EXAMINER